

ABSTRACT

Methods for forming a device isolating barrier, and methods for forming a gate electrode using the device isolation barrier are disclosed. In an illustrated method, a semiconductor device isolating barrier is formed by forming a pad oxide layer and a first nitride layer on a semiconductor substrate; forming a trench region by etching the pad oxide layer and the first nitride layer; forming spacers at sidewalls of the etched pad oxide layer and the etched first nitride layer; forming a first trench by etching the semiconductor substrate using the spacers and the etched first nitride layer as a mask; and, after forming a liner oxide layer and an oxide layer filling the trench, forming the device isolating barrier by flattening the liner oxide layer and the trench oxide layer to expose the etched first nitride layer.